

GREY EEL CATFISH (*PLOTOSUS CANIUS*) FISHING BY WOMEN FISHERS IN THE SUNDARBANS, BANGLADESH

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Abstract. The Sundarbans' women fishworkers play a crucial role in the delta's ecological economy by harvesting, processing, marketing, and inventing within the fishing sector. Through a case study in Koyra, a region in close proximity to the Sundarbans mangrove with a significant reliance on fisheries for local livelihoods, this study examined women's participation in small-scale fishing, particularly in grey eel catfish, *Plotosus canius* (locally known as *Kain magur*). During 'Mora goan' (the last phase of the full or new moon lunar cycle), a group of women, primarily widows and divorced women, fish *Kain magur* on daily trips or for two to three days' expeditions in the Sundarbans waterways. To support themselves, they fish with hooks and lines using live crab bait, catching 15–20 kg of *Kain magur* each trip. Additionally, the sociodemographics and fishing activities of the fishworkers inhabiting Koyra Upazila were examined. The main occupations of households around Sundarbans are fishing and day labor, followed by agriculture. In fishing practices, the women and other small-scale fishworkers utilized hooks and line, followed by various fishing nets. The most popular way to catch *Kain magur* is using lines and hooks, which are easier for women fishworker to use. While 2% of fortunate fishworkers are able to catch more than 25 kg of fish every day, the majority of fishworkers (59%) are only able to catch 5 kg. The study's findings add to our knowledge of the gendered aspects of small-scale fishing and provide relevant data for creating management plans that are inclusive of all genders. The voices and contributions of women fishworkers within the intricate socio-ecological fabric of the Sundarbans can only be properly valued and empowered by matching practice with equitable reality. Future research should focus on how women use the Sundarbans' resources, the impact of social and economic capital, and the growth of small-scale fisheries for ecologically and socially sustainable practices.

Key words: Women fishworker, Sundarbans, Grey eel catfish, *Plotosus canius*

INTRODUCTION

Bangladesh and India share the Sundarbans, the largest mangrove delta in

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the world, which offers a distinctive ecological and socioeconomic environment. Millions of people rely on forestry and fishing for their livelihoods throughout its rivers and tidal canals. Women have traditionally participated in a variety of fisheries-related occupations within this ecological economy, but their roles, difficulties, and realities are frequently overlooked. In order to support themselves in the Sundarbans' small-scale fisheries (SSF), women actively participate in a variety of fisheries-related activities. Despite women's substantial contributions to livelihood and nutritional security, their efforts are sometimes overlooked, which results in an unequal distribution of benefits between men and women (Roy et al. 2023).

In the Sundarbans, women work in the fisheries sector in a variety of capacities, including post-harvest labor, processing, and active fishing. In mangrove estuaries, canals, and nearby water bodies, women frequently catch tiger shrimp and mud crab seed/PL (post larvae) by hand netting. Shrimp PL still employs at least 100,000 women in the Sundarbans, despite the fact that fewer women are catching it than in the 1990s. Although the number of seedlings rises in April and May as well as in August and September, many local women continue to work throughout the year despite being constantly submerged in salty water and being at risk of tiger and crocodile attacks (Hoq 1996, Dugupta et al. 2022). These captures are often sold locally or consumed at home. Fish drying, sorting, and processing are important steps in the fisheries value chain, and many women work in these areas in and around the Sundarbans. Women are now more involved in aquaculture, especially mud crab farming (fattening and soft-shell) in farmhouse ponds and canals close to the Sundarbans. Furthermore, despite being at the forefront of the effects of climate change, fisherwomen in Bangladesh's coastal belt continue to be structurally neglected in both policy and practice. They continue to be underappreciated, under-supported, and frequently left out of the various safety nets and entitlements intended to safeguard poor people, despite their vital role in maintaining household livelihoods (Samara 2025).

The Grey eel catfish, *Plotosus canius*, locally known as *Kain magur*, *Gang magur* or *Sagar magur* belongs to the Plotosidae family of catfish and inhabits in estuaries as well as the muddy tidal waterways that characterize the Sundarbans' maze-like network of rivers and canals. *P. canius* is an amphidromous, demersal, bony, and poisonous catfish (Prithiviraj and Annadurai 2012). The species coexists with economically significant fish including seabass, croakers and river catfishes in the estuarine and mangrove fish communities. Despite the limited existing information on women's fishing activities in the Sundarbans, the current study was conducted in order to: 1) examine women's participation in the Sundarbans fishing activities; 2) analyze

fishing methods and the Sundarbans fisheries for grey eel catfish (*P. canius*). Additionally, the study made an effort to address concerns regarding women's contributions to SSF in the Sundarbans with the aim of promoting social equity and sustainable community upliftment.

MATERIAL AND METHODS

Study area: The study was carried out over a 12-month period, from April 2024 to March 2025, in the Sundarbans mangrove forest of Koyra Upazila in the Khulna region of Southern Bangladesh. Koyra Upazila is situated between latitudes 22°12' and 22°31' north and longitudes 89°15' and 89°26' east. The Koyra, Shakhabaria, and Arua Sibsa rivers, which have many canals, are the main rivers in Koyra Upazila that flow close to the Kassiabad and Baniakhali Forest Stations under 36 no. Compartment of Sundarbans (Fig. 1).

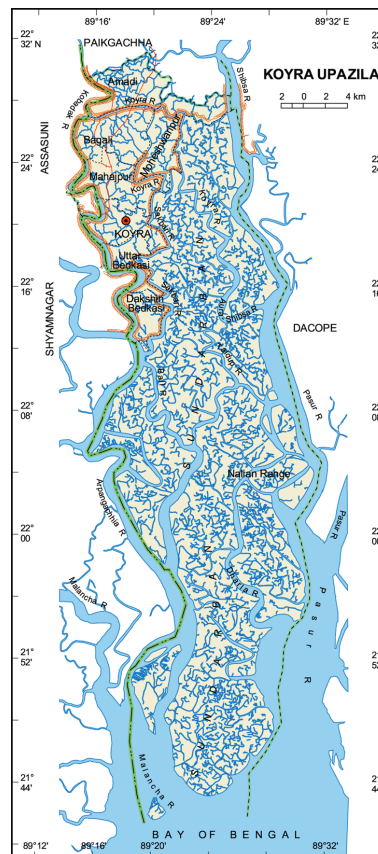


Fig. 1. Study areas.

Field survey and data collection: In the Sundarbans, women participate in fishing targeting *Kain magur*, in addition to other fish and shrimp species. *Kain magur* can be found in mangrove canals, brackish creeks, and estuaries, which are areas where women frequently work as near-shore and small-scale fishers. In shallow tidal streams, women usually use hook-and-line techniques and small gill nets to capture *Kain magur*. Fishing is typically done in small groups (2-3 members). Women may sell the catch to local markets or commission agents in a market. This women group had not been identified prior to fieldwork. The women come from nearby villages inhabited by the fisher community.

Field surveys were conducted in fishing villages to gather relevant socioeconomic data and information on fishing methods and gears. A basic survey questionnaire was purposefully created, pretested, and revised with the required adjustments. Subsequently, the final questionnaire was created in logical order to make it easier for respondents to provide systematic answers. The following factors were taken into account: how resources were used, the responsibilities that women fishworkers played (such as household, community duties and production etc.), how gender roles changed over time, the hazards to occupational health, and the limitations that women fishworkers perceived. In total 105 fishing village households (HH) were chosen at random from two fishing villages at Koyra Sadar and Bedkashi Union for the survey. Verbal consent was taken from each of the respondent or Focus Group Discussion before proceeding the interview.

Water temperature (°C), Oxidation Reduction Potential (ORP, mV), pH, Dissolved Oxygen (DO, mg/L), Electric Conductivity (EC, $\mu\text{S}/\text{cm}$), Total Dissolved Solids (g/L), Salinity (ppt), Seawater Specific Gravity (SSG, ST) and Chlorophyll-*a* ($\mu\text{g}/\text{L}$) were measured *in-situ*. A GPS enable Multimeter (AQUAREAD, AP-2000, UK) was used for determination of water quality parameters on-spot.

Data analysis: The survey data and information were gathered, categorized, and analyzed in accordance with the study's goals and pertinent criteria. While some data were limited to narrative evidence, others incorporated numerical values. Subsequently, the data were presented in tabular or graphical formats and analyzed using Microsoft Excel 2016.

RESULTS AND DISCUSSION

Fishing community in the Koyra with fishing practices: There are five main categories of fisheries in the Sundarbans: capture fisheries that target larger fish from rivers and creeks; crab fisheries that target mud crabs in the Sundarbans;

shrimp culture in estuarine wetlands; aquaculture of freshwater fishes; and juvenile fisheries that target naturally available shrimp/crab/fish seed, which are caught alive and sold live for aquaculture. While men typically fish from boats in the Bay of Bengal, estuaries or in large rivers of the Sundarbans for five to seven days, women typically collect small fish, snails, and other aquatic animals from Sundarbans mangroves or nearby river and canals. However, women from Sundarbans fishing villages directly participate in a variety of SSF-related activities as a means of subsistence. For instance, women collect shrimp, crab and fish seeds from mangrove waterways, harvest fish and crabs from rivers, and canals using nets and traditional traps (Roy et al. 2020), dry fish primarily in winter with set-bag-net fisheries, work as post-harvest laborers, sort fish and shrimp from bag-nets, and engage in fish processing activities. The sociodemographics of the two fishing villages at Koyra are shown in Table 1.

Table 1. Sociodemographic characteristic of house hold (HH) samples

Occupation	Percentages	Income sources	Percentages
Fishing	31	Fishing	42
Agriculture	16	Agriculture	16
Business	10	Business	10
Day labor	29	Service	4
Un-employed	14	Shrimp gher owner	8
		Day labor	24

Due to their extreme poverty and lack of employment opportunities, nearly every resident of the communities next to the Sundarbans reserve forest (SRF) is entirely dependent on SRF resources. Because the area historically contained resource-rich forests at the time, resource-poor people moved from other locations and established there, relying solely on SRF resources. The main occupations of Koyra households in the vicinity of Sundarbans are fishing and day labor, followed by agriculture, and business. For the majority of HHs, fishing (including honey collection) is their primary source of income, followed by day labor, agriculture, business, shrimp gher operations, and services. Twenty-one percent of the HHs in Koyra Upazila are completely landless, while only 19% of families own cultivated land and 81% had no cultivable land. However, nearly 80% of households own homestead land. Approximately 62% of HHs obtained credit from various sources, including banks and non-governmental organizations. Women borrow money from non-governmental organizations, while men mostly borrow money from banks. Figs. 2-4 represent the fishing areas, fishing gears and harvest amounts of the fishers of Koyra. The majority of fishers catch fish nearest river and canals of Sundarbans under Kassiabad and Baniakhali forest stations. Most fishworkers from the Koyra conduct their fishing activities in the adjacent rivers and canals of the Sundarbans. In the Sundarbans, fishers typically travel 5 to 20 kilometers through the river and

canals. The trip takes three to five hours on average. Fishing using mechanized boats is forbidden in the Sundarbans, thus fishermen always go at low tide and return at high tide. Depending on the net type, each boat can carry two to five passengers. When using spears, one or two individuals usually operate. The boats are between 4.5 and 7 meters in length.

To fish within the Sundarbans, fishers must obtain a fishing pass (Boat License Certificate, or BLC) from the local forest station for seven days. The majority of small-scale fishworkers, including women, utilized hooks and lines, followed by various fishing nets (Fig. 3). Hooks and lines are mostly used to catch *Kain magur*, and this gear is easier for women to use. The Sundarbans supports at least fifteen different types of fishing gears, including nets, traps, and hooks. In the Sundarbans and nearby water bodies, there are about 20 different kinds of fishing nets under 7 categories and 13 different kinds of fishing traps and gears under 3 categories (Kabir et al. 2019). Fishermen can fish for a maximum of four to six hours each day at high and low tides. In the past, fishworkers employed a variety of nets to capture more fish. However, fishworkers now catch fewer fish because of strict limitations on nets like Charpata *jal*. Fishworkers currently utilize nets with a mesh size of one inch, approximately equivalent to the diameter of a five-taka coin. The majority of fishworkers (59%) are able to fish 5 kg per day, whereas 2% of fortunate fishworkers— are able to catch more than 25 kg of fish in a day— who also make good business (Fig. 4). Additionally, the fishing area has shrunk yet the number of fishers has tripled as a result of poisoning and the expansion of restricted and protected areas in the Sundarbans. The ‘Mundas’ are a long-

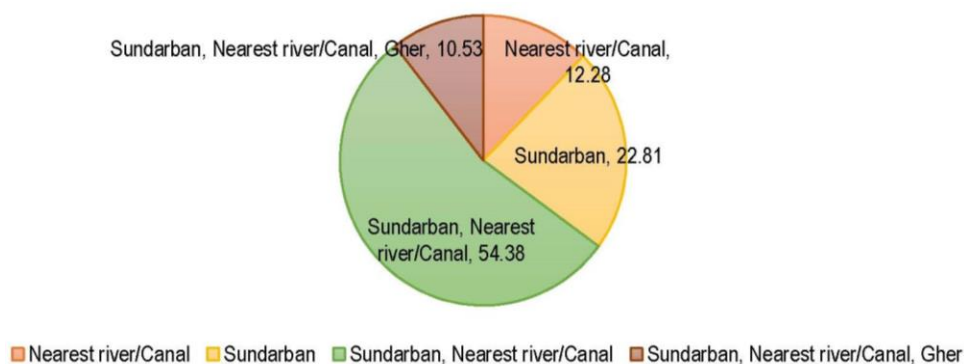


Fig. 2. Fishing areas by choice/practice by fish workers.

standing, traditional fishing community in Koyra. In the middle of the eighteenth century, the ‘Mundas’ were transported by the British authority to the Koyra

region of Khulna from West Bengal and Orissa, India. Despite being overlooked and subjected to discrimination, 'Mundas' women are the primary forces behind transformation, whether they are fishing in the Sundarbans or planting and harvesting crops in the fields. They reside on the Sundarbans' shores. The 'Mundas' are often among the first to experience

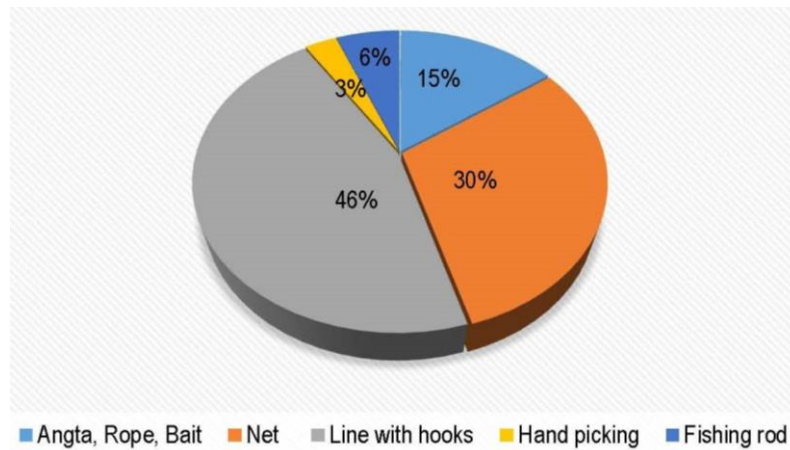


Fig. 3. Fishing techniques & gears used by fish workers.

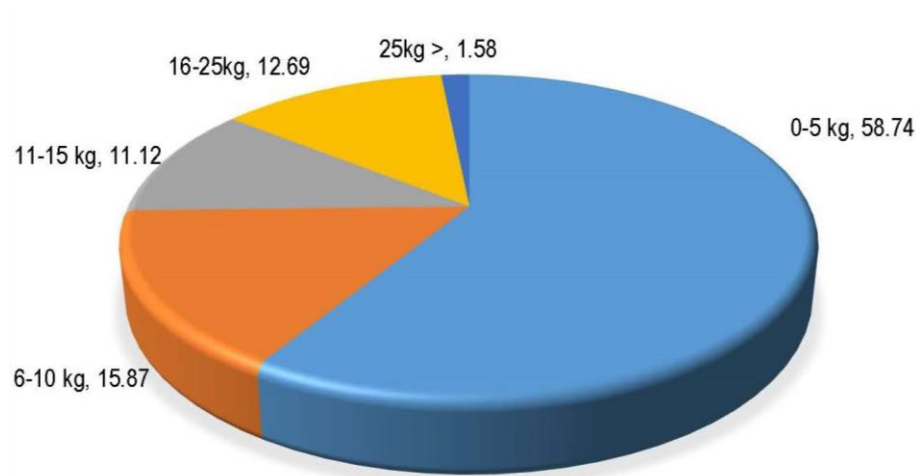


Fig. 4. Amount of daily fish catch by fishworkers (1-3 person).

the impacts when a natural disaster occurs, such as an embankment collapse, river erosion, storm, tidal wave, or cyclone. In the past, their primary sources of income were farming, fishing in rivers, and felling trees in the Sundarbans to construct human settlements. Many of them have chosen to

work in different fields after quitting their previous occupations. The 'Mundas' community's occupation also altered the nature of work over time. In Koyra Sadar, North Bedkashi and South Bedkashi unions, there are currently around 490 families living in this impoverished area.

The Sundarbans' fish supply is influenced by a number of factors, including the full or new moon, day or night, tide or ebb, etc. The *Amavasya* (New moon) and *Purnima* (Full moon) lunar cycles are used to determine the *Goan*. "Gonamukh" refers to the *Goan's* fishing season. "Gonamukh" cites to a total of seven days, including the *Amavasya* and *Purnima* days (*Panchdarshi*), the three days prior (*Dwadashi*, *Krayodashi*, *Chatudarshi*), and the three days following (*1Ma*, *2Ya*, *3Ya*). 'Mora goan' refers to the eight days that fall outside of this time frame. In a typical month, there are two "Gonamukhs" and two 'Mora goans'. The *Amavasya goan* has more fish than the *Purnima goan*. At night, during the final ebb and full tide, more fish are captured. There are increased water movement and flow in the rivers and canals because the sea's water pressure is directed toward the coast. The water is turbid at this time, and there are more fish available at night than during the day. There are significantly more fish available during the *Joba goan* or *Purnima* period, which occurs three days prior to the full moon, and the *Dala goan* or *Amavasya* period, which occurs three days prior to the new moon.

As a reserve forest, the Forest Department imposes fishing ban to protect wildlife, including fisheries, in addition to nation-wide other fishing prohibition periods, which are highlighted in the following Fig. 5.

Fishing prohibition time	Months												Remarks
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Fishing ban period by BFD													The 22-day fishing ban during the mother Hilsa protection does not apply to the Sundarbans as Hilsa is not now available in the Sundarbans except Baleswar river. In addition to the fishing ban announced by the BFD in the Sundarbans, permits are closed for about 15 days during the Ras Purnima Mela at Dublar Char in November.
Mud crab fishing ban period by BFD													
Marine fish banning period (58 days, previous 65 days) by DoF													
22-days mother Hilsa protection period by DoF													

Fig. 5. Fishing calendar in the Sundarbans.

Kain magur (*Plotosus canius*) fishing by women fishworkers: A team of women fishworkers from 4 No. Koyra Sadar Union are actively involved in *Kain magur* fishing. The group consisted of seven or eight women primarily including divorced and widowed women. For the past ten years, women have been using a spear-like hook-and-line method to fish *Kain magur* in the Koyra river, Golkhali,

Jolakhali, Bara dhagra, Choto dhagra, Shalki canals, etc. A strong, long thread or rope is used to make this type of gear, which is approximately 90 to 150 meters long. They catch a variety of fish, including seabass, croaker, gagora catfish; even shark, and ray fish, but their primary target species is *Kain magur*. They use either shrimp or crab as bait, with crab being preferred.



Plate 1. Women fishworkers of Sundarbans with *Kain magur*, *Plotosus canius* fish catch.

Due to the relatively lower water flow during *Mora goans*, which aids in spear placement, they typically fish during that period. They don't own BLCs; instead, they rent BLC from license holders. Occasionally, BLC holders receive cash in advance as a loan from commission agents in the market. The women's group used to rent boats for fishing, but they now have their own boats. Typically, two to three women fish in a single boat. Depending on the lunar cycle, they begin fishing in the very early morning and return to shore in the evening. During *Mora goan*, in the first 2-3 days, the women fishworkers use to fish long distance canals of the Sundarbans and stay overnight within the forest. On the other hand, in the latter part of '*Mora goan*', they used to fish the surrounding canals every day. The women also fish using cast nets during their fishing trips in the Sundarbans, and they consume any additional fish while they are there.

Kain magur are more abundant in the months of June through August, which is usually a fishing ban period. It is more accessible throughout the three months of September through November following the expiration of the ban, and it is comparatively less accessible from December through May. The average weight of the *Kain magur* caught each month by the Koyra's women group is presented in Fig. 6. Fish are captured at their largest size in September, February, and March, and at their smallest in January. The economics of *Kain magur* fisheries by women estimated to be Tk. 8,000 to 10,000 in a *Mora goan* period with a daily income of Tk. 400-500 per head (at approximately Tk. 600/kg) against an expense of Tk. 3,500.

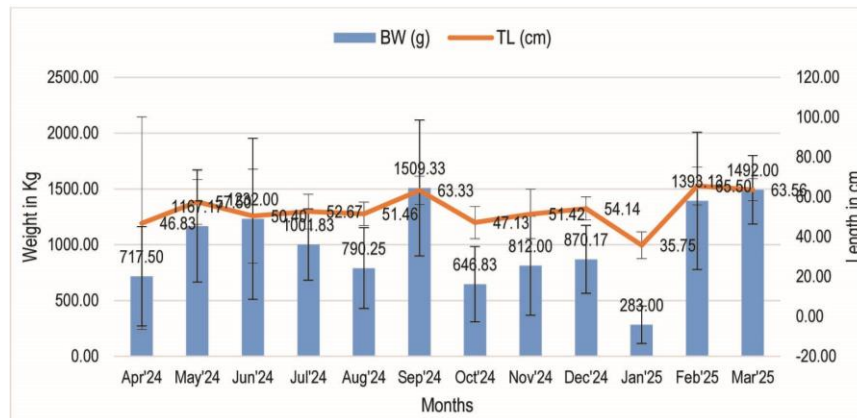


Fig. 6. Month-wise average weight and length of *Kain magur* catch by the women fishworkers in the Sundarbans.

In the Sundarbans, women's productive fishing jobs included catching tiger shrimp (*Penaeus monodon*) and mud crab (*Scylla* spp.) seed, catching fish and crab, repairing nets and gear, helping to organize fishing trips, and sorting fish—all of which had a significant influence on household earnings. The average monthly income for women employed in the coastal fishing is approximately BDT 4,141, which is frequently less than half of that of their male counterparts (Karim et al. 2015). In the absence of data from Bangladesh Sundarbans, 23% of women in the Indian Sundarbans who earned money from sources other than SSF, such as tailoring, agricultural labor, housekeeping, raising livestock, etc., generated an average monthly income of Indian Rs. 1900 (BDT 2456) (Roy et al. 2023). Women's contributions in SSF were less apparent and appreciated because they participated in these activities in addition to their domestic responsibilities. In addition to their production function, women typically undertake two or more jobs at once, such as domestic chores and community service. Grey eel catfish is one of the many fish species that contribute to the complex and productive fisheries of the Sundarbans region. Although it is evident that women participate in the catch of *Kain magur*, they are frequently left out of species-specific fisheries statistics and management plans, denied access to compensation or disaster relief, and removed from fisher registration systems required for obtaining BLCs. Their status as key resource users are often concealed by classifying their labor as "assisting" or "subsistence". For most individuals who live near mangrove forests, fishing and related activities constitute their main source of income (Walters et al. 2008). Therefore, higher population density is probably going to translate into higher product demand. Mangrove forests near sizable human populations are therefore predicted to have the highest fishing effort and catch (Hutchison et al.

2014). It should be mentioned that fishing effort does not always result in a linear increase in fish harvest. Mangrove habitats can occasionally be harmed by dense human populations through overfishing. These behaviors make mangrove-fisheries less productive in places with high demand and fishing activity than in areas with less people (Hutchison et al. 2014).

Table 2 represents seasonal changes in the water quality metrics of the two major rivers in the study area. Water salinity varied greatly across the seasons, with the pre-monsoon season exhibiting the highest salinity. Seasonal variations were also observed in the other metrics. *P. canius* is highly adaptable, often found in brackish to nearly freshwater environments. An amphidromous species, the Grey eel catfish is well suited to brackish and mangrove habitats.

Table 2. Seasonal variations of water quality in the major river system of the study area

Water quality	Pre-monsoon		Monsoon		Post-monsoon	
	Shakhabaria	Arua Sibsa	Shakhabaria	Arua Sibsa	Shakhabaria	Arua Sibsa
Temp. (°C)	27.65	29.4	30.60	29.65	24.55	24.65
ORP (mV)	0038.3	0032.3	0073.2	0039.3	0108.5	0093
pH	8.84	8.58	8.44	8.64	8.77	8.7
DO (mg/L)	5.62	6.04	5.75	5.24	7.45	7.54
EC (μS/cm)	34.7	32.97	11.49	6218	7577	6.02
TDS (g/l)	22.51	21.46	7474	4035	4956	4455
Salinity (ppt)	21.77	20.66	6.52	3.37	4.24	3.74
SSG (ST)	13.1	11.9	0.5	0	0	0
Cho-α (μg/l)	0	1.31	0	0	24.55	24.65

It is highly euryhaline and can withstand a wide range of salinities and its overall physiological health depends on a constant, slightly alkaline pH. Its population abundance is largely dependent on certain overlapping water quality characteristics that control the fish's physiological well-being as well as the availability of its favorite benthic food (Usman et al. 2013). *P. canius* is one of the species that is commercially fished in estuarine capture fisheries, according to studies on Sundarbans fisheries, despite the lack of precise catch numbers. As an ecological indicator fish of the Sundarbans, it is included in species inventories and yield estimations for the forest's artisanal fisheries (BFD-IUCN-GIZ 2022), reflecting its regular occurrence as a daily catch for local populations. Regulations pertaining to fisheries and conservation in the Sundarbans are a reflection of the necessity to safeguard breeding populations of several fish species. To protect spawning and natural regeneration, close-season regulations in the Bangladesh Sundarbans forbid the fishing between

June 1 and August 31 of each year. Due to poverty and reliance on livelihoods, illegal fishing is still a major problem despite the strict and heightened surveillance. The low level of poverty of marginalized fishing groups, a lack of adequate alternative income, and complicity with corrupt officials and local traders are the main causes of illegal fishing or subsistence-fishing in the Sundarbans' adjacent waterways. During field visit and interviews, it was seen that many people, including those having BLCs, enter the Sundarbans to catch fish, crabs, and shrimp fry during the fishing ban period. Poor fishermen are pressured by dishonest fish dealers and "company mahajans" to use harmful agricultural pesticides (such as Rotanone and Fighter) as bait in order to engage in "Poison Fishing". The Koyra women's fishing group also engaged in fishing activities managing local leaders or, occasionally, BFD individuals during fishing ban period.

Although the government has implemented a scheme to provide fishermen with identification cards and food rations during the prohibited periods, those who have benefited from the assistance said it was negligible. The usage of poison is currently one of the causes of the fish loss in the Sundarbans region. Fish cannot be discovered in a canal for six to seven days after poisoning. Fish availability declines as the water's quality deteriorates. The loss in fresh/brackishwater fish species in the Sundarbans and nearby river basin has previously been attributed to excessive salinity. Since the Sundarbans West forest area was designated as a Wildlife Sanctuary by the Bangladesh government in 2017, there are now more protected canals. The Sundarbans Wildlife Sanctuary area currently makes about 52% of the total forest areas, with restrictions expanding over the past one to two years. The current stock of *P. canius* in Bangladesh is overfished, according to population dynamics of Grey eel catfish (total length and weight ranged from 13.3 cm to 87.4 cm and 28g to 5200g) collected from commercial barrier trap nets of 20–24 mm mesh size from mangrove estuaries, Bangladesh (Rabby et al. 2020). *P. canius* is classified as Near Threatened globally, despite the species' continued presence in local fisheries catches.

The Sundarbans' natural productivity supports a wide variety of fisheries, but uncontrolled exploitation and overfishing can jeopardize sustainability. The Grey eel catfish's poisonous spines are noteworthy biological characteristics that can result in severe wounds and indicate that fishworker in artisanal fisheries must handle them carefully. Fishing *P. canius* involves substantial occupational hazards, particularly for women. The species has venomous dorsal and pectoral spines, causing painful injuries. Long-term exposure to mud and saline water also causes joint issues and skin diseases. Despite these dangers, women who

work as capture fishers are rarely acknowledged, and injuries frequently go untreated or unreported. Acknowledging women's involvement in *Kain magur* fishing could emphasize the need for gender-inclusive fisheries management and dispel the stereotype that women do not engage in capture fisheries. In addition, *Kain magur* is one of several species that contribute to subsistence and small-scale commercial fishing livelihoods for coastal and mangrove-dependent people in the Sundarbans. When larger, high value species are subject to seasonal prohibitions or regulatory constraints, its collection helps ensure food security and generate revenue. However, there are still few comprehensive socio-economic studies of *P. canius* fishing that address factors including effort levels, gear types, market integration, and gendered participation. In reality, the mangrove delta's local inhabitants are supported by a diverse range of traditional and artisanal fishing methods, including the fishing for this catfish. Numerous challenges affect the lives of fishing women in the Sundarbans, such as a lack of credit and lending facilities, a lack of programs tailored to their needs, a lack of input facilities, sporadic extension contact, and a lack of consistent efforts to encourage women to participate (Roy and Bhaumik 2013).

Despite the fact that fishing is typically associated with men (Lentisco and Lee 2015), the present study on the Sundarbans coast shows that women fish as well, which is consistent with research that questions the dominance of men in other fields like agriculture (FAO 2021). In this way, this study adds to the expanding conversation on "women also fish", which is based on case studies that highlight the cultural variety of women's fishing methods across the globe (Harper et al. 2013, Shaoun and Mahmood 2025). According to earlier research, fisherwomen seem to fish less than fishermen in terms of effort and volume (Bradford and Katikiro 2019). Additionally, compared to fishermen, fisherwomen's fishing operations are more spatially restricted. Men exploit the entire seascape for fishing, whereas women focus mostly on intertidal zones. Furthermore, the present analysis supports research in other fisheries contexts by indicating that women's access to fishing vessels is hampered by socioeconomic hurdles, such as cultural taboos or restricted access to capital, which keeps them from fishing in deeper waters (Thomas et al. 2021). The present study reveals that women make up a significant portion of Bangladesh's coastal fishing population, which supports the necessity for women to have management and decision-making roles in SSFs.

Women fishworkers suffer systemic obstacles and marginalization that influence their day-to-day lives despite their substantial contributions. Women engaged in inland, estuary, and post-harvest activities are frequently left out of laws, rules, and welfare programs because policy frameworks frequently define "fishers" narrowly, historically favoring male-dominated deep-sea or mechanized

fishing. A large number of women who work in fishing come from low-income or marginalized groups. Their agency is frequently limited and they have additional obstacles when trying to obtain finance, training, or market possibilities since they have little power over assets, earnings, or decision-making within homes and communities. In the Indian Sundarbans, 94% of aquaculture workers were men. While the majority of women (73%) harvested fish from water channels for home use and income, the majority of men (64%) also fished in rivers and estuaries. Forty-two percent of the natural fish and prawn seed collectors from mangrove wetlands were female (Roy et al. 2023).

The Sundarbans' women fishworkers are essential to the delta's ecological economy since they harvest, process, market, and innovate in the fishing industry. However, traditionally, both policy and practice have undervalued and under-protected their roles. Legal recognition, gender-inclusive policy design, health and safety measures, and ongoing investment in local infrastructure and capacities are all necessary to close this gap. The voices and contributions of women fishworkers within the complex socio-ecological fabric of the Sundarbans can only be properly valued and empowered by matching practice with equitable reality. *Kain magur* fishing has a distinct but poorly understood function in Sundarbans fisheries. It enters artisanal fisheries with other finfish and is a well-established member of the estuary fish assemblage. Recognizing its ecological function, management initiatives, such as seasonal prohibitions, seek to safeguard its breeding population. Sustainable practices will be improved and communities that depend on species like *P. canius* will continue to profit from the diverse aquatic resources of the Sundarbans if research on biological and fishery issues is conducted.

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